Ergonomics

Fitting the Work Environment to the Worker

The ergonomics program at Los Alamos is central to worker safety, a top priority at the Laboratory. For those who take advantage of it, this program has been highly successful. For example, to date, the Radiation Protection Group has achieved 100 percent reduction in employees at high ergonomic risk by implementing a Laboratory pilot of a computer-based ergonomics self-assessment. Such achievements have made our ergonomics program a model for other national laboratories and University of California campuses.

Measuring Spinal Motion
The lumbar motion monitor measures spinal motion and compressive forces of the spine.

Before ergonomic intervention

Ergonomic analyses and self-assessments lead to worker safety

Tiers of qualified ergonomics analysts evaluate work environments and recommend changes not only to simple office setups but also to more complex environments in which workers handle materials. Reporting ergonomically related symptoms of discomfort or pain to the Laboratory's Occupational Medicine Group is strongly recommended. Each report automatically triggers an ergonomic analysis, after which employees are encouraged to visit the Ergonomics Demonstrations Resource Room, try ergonomically developed products, and select those that work best. In addition, by using an interactive computer-based program licensed from Remedy Interactive, Inc., employees can assess their postures by comparing them with schematics, learn about the human body in relation to ergonomic risk factors, and improve their work conditions.

After ergonomic intervention

Stretches during breaks decrease exposure to ergonomic risk

The automated stretch-break package licensed from Paratec, Inc., is available free of charge to all employees and can be downloaded from their computers. Although appropriate stretches decrease the length of exposure to risk factors, they do not substitute for good ergonomic design.

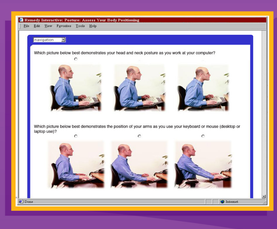
The ergonomics R&D laboratory drives ergonomic advances

In our "ergo" laboratory, we study nontraditional work exposures and measure the effectiveness of interventions intended to abate ergonomic risk. We have used results from these studies to design a pilot of the computer-based self-assessment. In the ergo laboratory, we also study the effects of whole-body exposure to vibrations with triaxial accelerometers and the effects of spinal motion with lumbar motion monitors.

Annual expositions increase ergonomic awareness

The Laboratory showcases its ergonomics program during annual expositions, when ergonomics training and education, as well as tools, computer devices, and furniture, are brought to sites around the Laboratory. Good ergonomics translates into increased worker safety and productivity.

Introducing ergonomically designed tools



Ensuring Worker Safety
As part of the ergonomics program, the subject matter expert trains and mentors analysts. Combined with the computer-based self-assessment (some frames of which are shown here) available to employees upon request, ergonomic analyses and controls implementation ensure safe working conditions.

Graciela M. Perez, HSR-5
gperez@lanl.gov
505-665-3642

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